

Figure 1

STC-1 GTC-1



Figure 2

ATG
+1
E1
E2
E3
STOP 3732

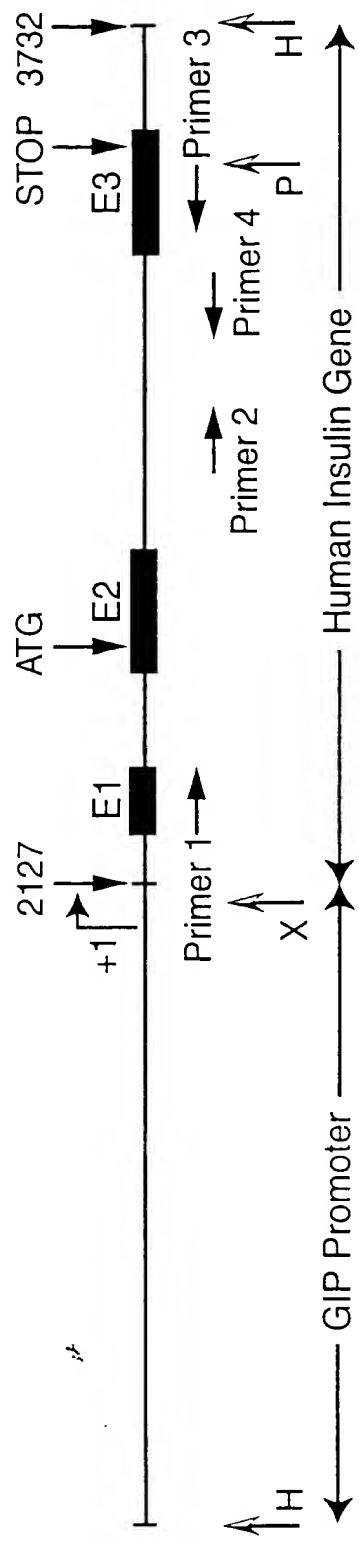


Figure 3

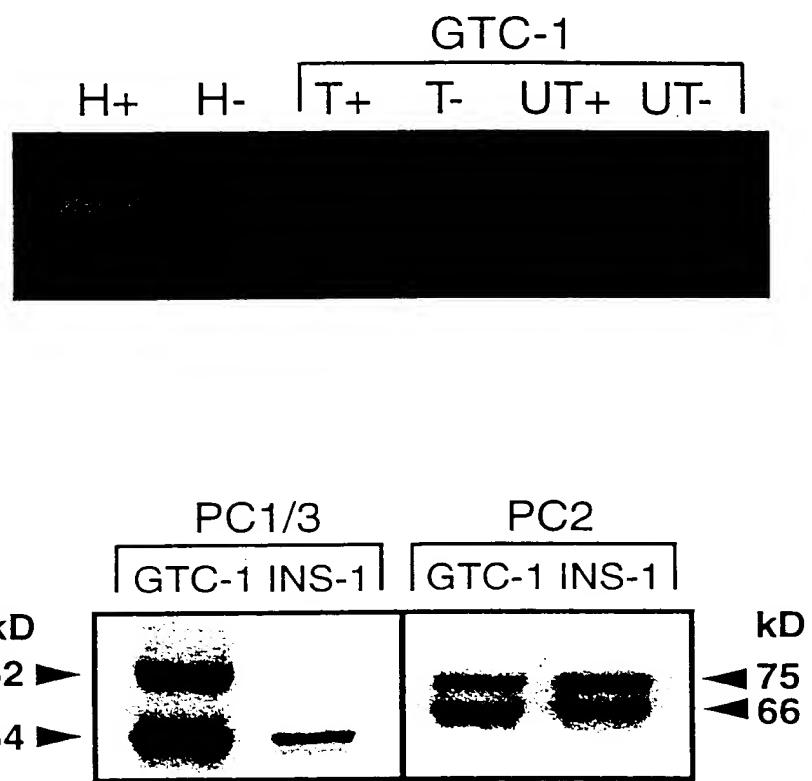


Figure 4

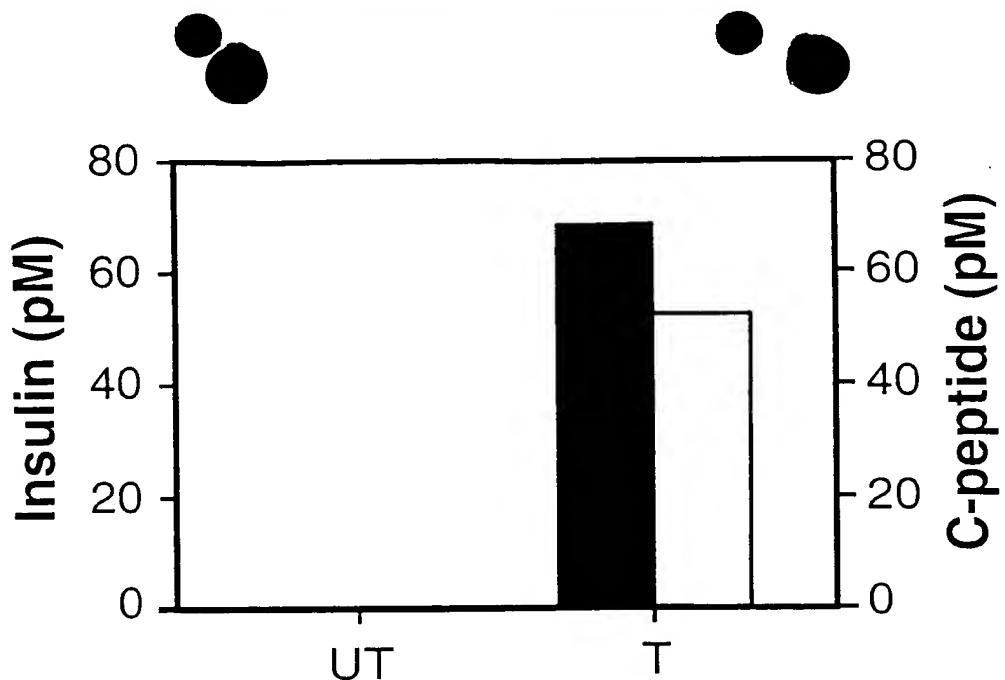


Figure 5

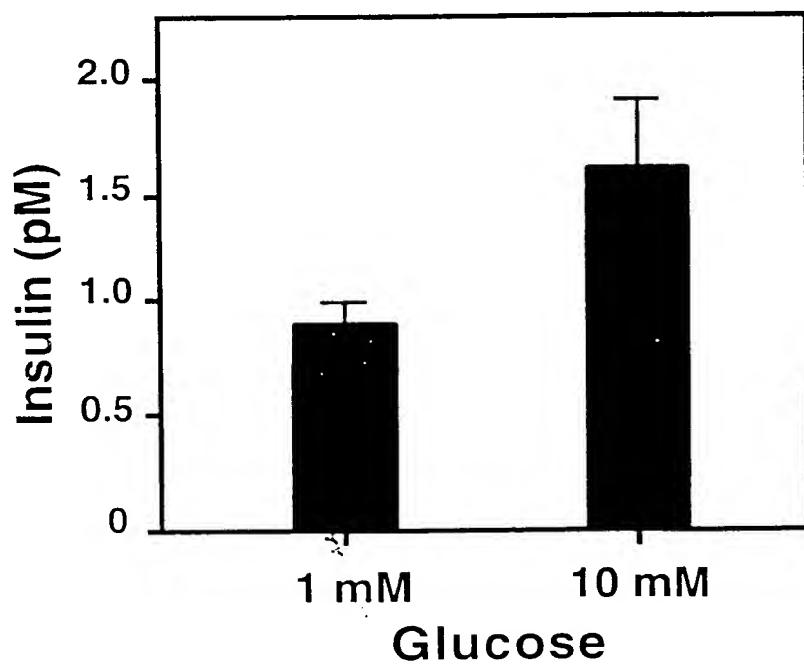


Figure 6

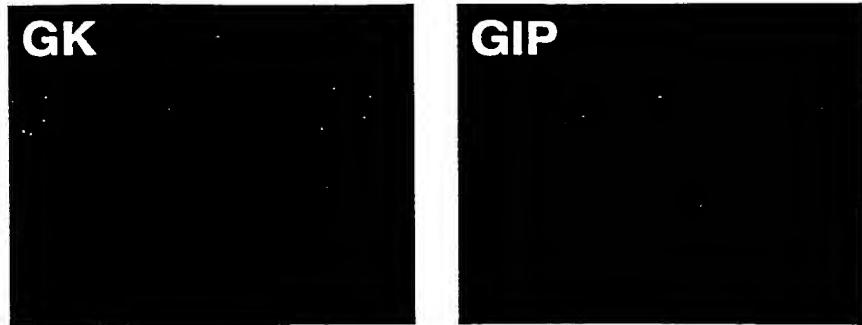


Figure 7

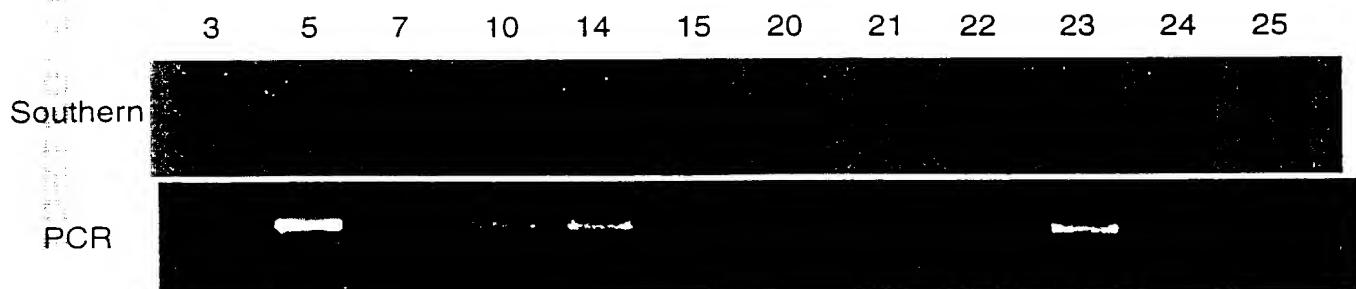


Figure 8

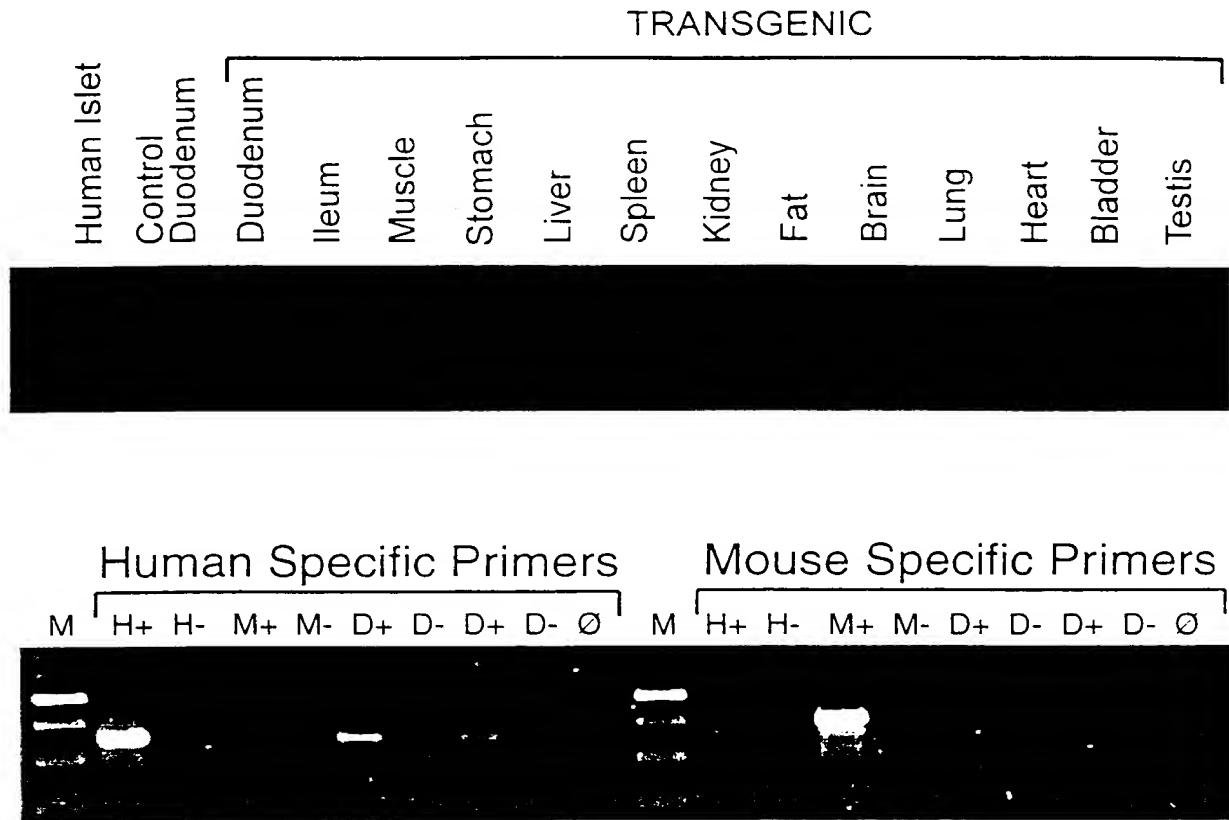


Figure 9

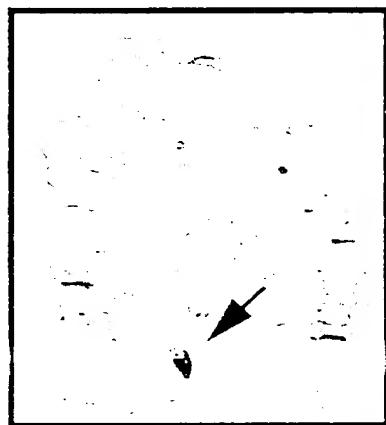
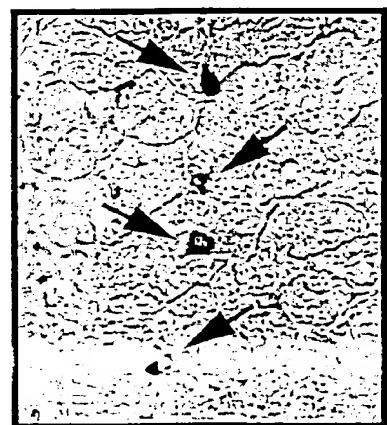
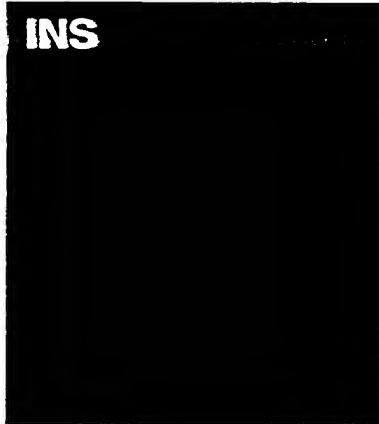
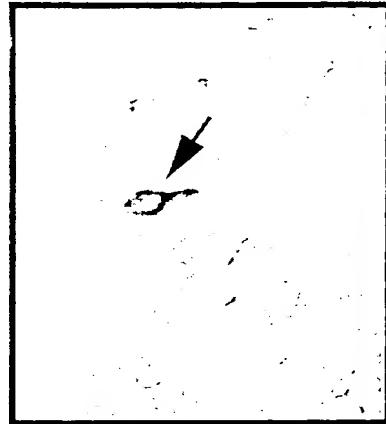
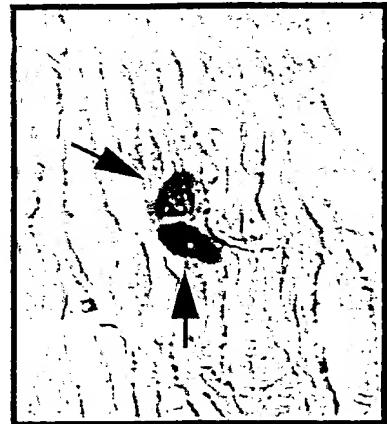


Figure 10

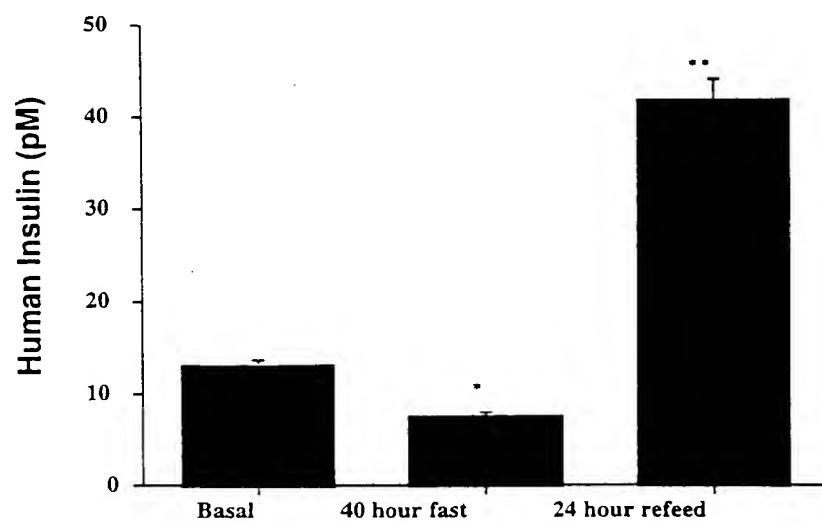


Figure 11A

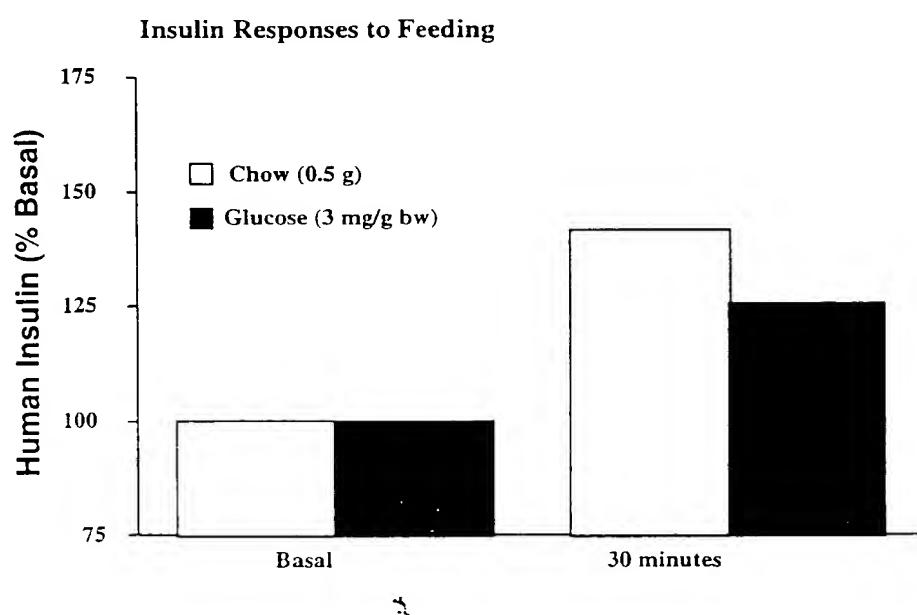


Figure 11B

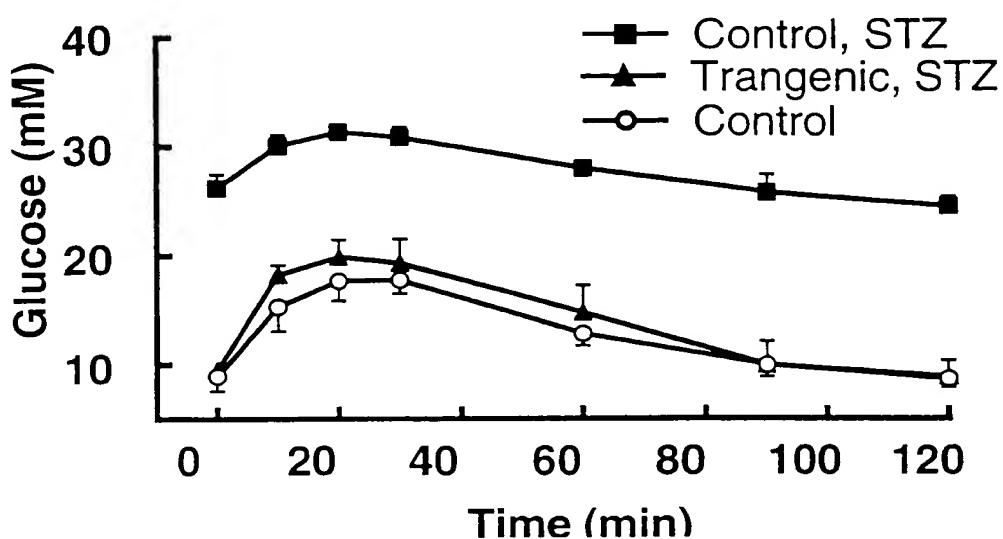


Figure 12

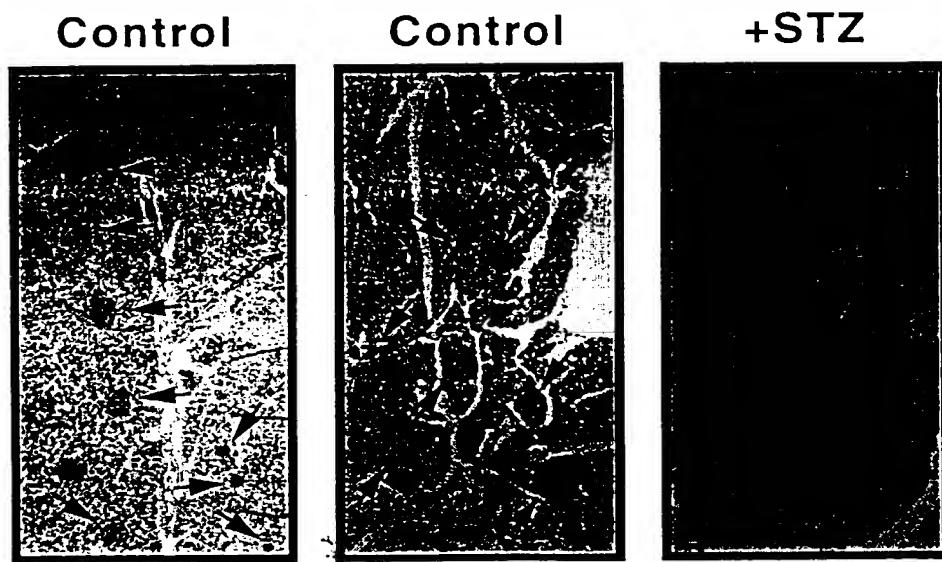


Figure 13

GIP Promoter

atctctccag tcccttcctc aacccttctga gaacaggcaa actccaccat gattggctta
taaatcggtt tatggaccta ctaaggatgt aacaactggg agcatgctta cctagcatgt
ccgaaacccg gagttcagtc cctagcactg cacaatctca gtccttatga agtagagggaa
agatcagagg ttcaaggaca acatcaattt gagaccagcc tgggtctactt accaaagaaaa
gaaagagaga aataaataaa tagatagata aataaataaa taagtaaata aatatcttat
ggctggagag tgggtcagt gttaagagc acttattgtg gggttgggga tttagctcag
tggtagagcg ttgccttagg aagctcaagg ccctgggttc ggtccccagc tccggaaaca
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taaagatata tatataataat atatatacat ataataatata tatgatataat atatataat atatcttgt
ggaggaagct ataccttct ttcttgagcc tccaacacat aaatgtgcc tgcattccca
ttcatattgc cccaaagtggg aaaccatgtg actataaact ctaagttctt agtcacttagg
aactctcaag acacccatct caggcagcat cacttccgga gtgcaccat tatcagttaa
catccacatc tgggatttag atcccagatc ccttctgttc cctcagaagt cacctacagc
tttggggg tgcccttcc ctcagagagt gccacccgag ttgaccctca ccaaggcaac
cccttgcacc cacagaatcc aacaggaagt aggggaaaga acagccggcc ctgtgcccag
aaaaaaaaagag gggagggaga aggggtgtc cagcctacca ccgggcaggt cccagataaac
actgcagata cccaaatgtt aatcacccat tagcacaggc ccagagcaaa gggaaagtg
attaggtgt aatgggtt cactgggcag gaccagtggg tttagcttc aaagataaga
gttttcagg ttaatcgca ccctgtgggtc tggatata aggaagctaa cacagggtct
tgaagcaaga tcctgag

Mouse chromogranin A (Chga) gene, promoter region.

ACCESSION L31361

1 ccgaaattac ccactacgtt ggaattctat aagggtggg tttgctgtt tgttacagc
61 tgcgtttg gcacccagca cagctgatgt gtcttaagcc cacgtcgatg cttaacacat
121 ggttgtgaa tgaatacacg cgaagccgt tctcatttag gggcatgagt aggcagaggt
181 gtggcagga agcaggaaag agcggaaaca ggtgcccaca gaaaggaggg gctctgaagg
241 atgcaggatca gtgccaaact gtcatccaga taccagggttc actgtggccc taggcccaggc
301 tgcacggggc ttccatgtg gtctgcccag ggtgagagca gaactgcgtt gggcgccggc
361 gaaggaaacc accaggaaag cagggttgca cccaaattat ccaggttta agtacattt
421 agagacaagg ctgggtgtt gaaggtcaga ggtgtccctg ggggtgttggc cttaggactga
481 ccactctgt tttatgttta tgggatggaaac tgcctcacac tgcgttgc cttaacttgc
541 ccttggagac tggtgaccta ggacccaccc atgtgtgggt tggaccctca gtcacacact
601 gaacgtgtt gaagccactg gtgtcagag cagggtctc ggcactgagg aagcagtgtac
661 cactatcccc tatcaaataa caattaaata cacacagaat gcgaggcaca caactgatgtt
721 tcaggagagg ctcgctcag gcaaggggtt caagaggctt ctgtgggacc cgctggatgt
781 tccaggaggat tcttaaagat gggcgtgcct ccagccaagt gaaatcaaga gaaaagtacg
841 cgaagtatag gaaaactcag cagtctggag aggttaatag gggaggaatc cgaggctcag
901 agacaggagt gacttgcctt cggacgcaca gcaagttggc aggtggagtt cagctgtgc
961 accttctgaa gccgggtacc ctttacagcc accagataca agcgggatag agacagctga
1021 tggagaagct ggaggtgggg ggccgggaccc cgaaggtggg gaaaggcgc gggggggcgg
1081 tcctatgacg taatttccctg ggtgtgtgcg cgcgtgtgcg tgcgtgtgcg tgtatataaa
1141 agccggcata gcattgtgc tgctgccccc gcccaccgc ccataccgc ttttaccacc
1201 accgctactg cagtgttccc gctgggtcag agctttgtta gcccagactac agacccactc
1261 ccgcctactt cctgcagcag ctgtccactt cttccgcac cgtccggcgc gctatgcgc

11

Figure 14

Mus musculus secretogranin II (Scg2) gene, promoter and exon 1, complete sequence.
ACCESSION AF037451

11

Mus musculus glucokinase gene, 5' flanking region.
ACCESSION U93275

I agcttaggt gtgtgaatat ctactttggc gtcggccct tggcataact aagtaagg
61 ccccttcaact ggggtgtacc agtttacccct ggactgtcta agcaacaaga aggatagaca
121 tggcctacca cagatttcat gtctgccact ggctatgtca gaacatgtag gagctttgg
181 aatcagtgaa acaggatattt tcagactgcc ttcccgtggcg tggggcttcc cgaaggccata
241 ttttccttag agtcagccct tcccaactgaa ggacaagctg tactggacag atgccagcca
301 cttgaactgg gaatacatgg tcatttaggc agctggctta tctcatccat ggtacttgat
361 ggcttcgggt cagcacctca cagaaaaggttc agacggggagg cttccggaaaa aacagagaag
421 caggcaggag atccgtcagg caaatccct gctccacagc ctgcattggac ttccctcagc
481 cttagtgcgt gtgggtccccca tctgagaaca ttgggttatat gttatttca aaccgatctg
541 cctttaagga gtggaaagaaa aaaactgtgg tgtttgggct acctttatga taatggccct
601 ttcatccctcc taataaaatat tgccaagtag ggttagattct atacgaaagc tcttaacccca
661 tggtatttgc aaatcatgtaa ggtgctata atgaataactg gatgcagtc gtacaggat

721 ataaaatggaa atgtaaagagc ctgttgctat gaatggtag ctaactagat gtgttacaag
781 aaatgttgc gttatgacgt gtggaaacctt ggtattgaag atgtggactc gaaacttgt
841 ggatttttg atgcccataat aaaaatgtga agaatactgt tccttaccaa aaagaagaag
901 aagaaggaga aggaggagga agaggaggag gaggaagaag agggggagga agaagaagag
961 aaggaggagg aagaggagga ggaggaagaa gagggaggagg aggaagaaga agagaaggag
1021 gaggactagg aggaggagga gaagaaggag aaggggaagg agagagtac cagaacattt
1081 ggggtccat cagaatacca gatactccag acatagtcac agaaggactg gtgtttgt
1141 taaataggta cttgaaaaag ttgtgggaa aacctcgagt gagatttgt gtcttagaaa
1201 tgataggcaa gattcatcca caagaatgcg acaagatggc tgccatca agccctgaac
1261 attaacagca ccagtagacc tgcttacacg gaagaaagca atctcatagg ccctcacccc
1321 aaacaaagac tacagacagc agaggaactg gagagcagga gaaatgggt ctccctttt
1381 tgagccccct aactggttgt caaatactca atggtcagcc ctgaaatcat atgcacaaag
1441 taatacttagc gcaactgaac agattgttagc tgggtgtgt tggtaatga taacaaagaa
1501 gaaaaggccc catgttagag agggagcaag gtggcatgg aggtatggaa ggagtggaa
1561 ggaggggtga gaaggggaaa gtgatgtat tatctttta ttataaaaa aataaaaaat
1621 gggctggta gatggctcag tggtaagag cacccgactg cttctccga aggtctggag
1681 ttcaaatccc agcaaccaca tggggctca caaccatccg taacgagatc tggccccc
1741 ttctggatgt tctgaagaca gctacagtgt acttacatataaaaataatctttt
1801 aaaaaaaaaata aaaaataaaaaa tattagaata aatgttagag gaatattttt aatttaacaa
1861 ctgggtgtg gcaaaaagctt tctcaacaa aacttaatc ctcagataa gaaaagacta
1921 gaatccacga cgtggataga tacttctgt tggatgtca aacttataatc cactattttt
1981 ctggcaga acttggatgtg taacttgggtt ggaaacacaa caccctggc aaacaaaaga
2041 ttactagata ttttagatga aatataaaaaa tactttccac aactgtatgg tagggaaacag
2101 ttcaatagta atataattat tgaacaaata atcctttaaaa gaagaaatcc agaggaatag
2161 caagttaggg gaagagaggg tgggtgtgt tgggtgtcg cgcacattt tagccaaaat
2221 agatgtatata cttaaatgaa catgcccattt aaacccattt ttttgcatac agtttacata
2281 tgctaataatgaa tactttttttt aaaaacattt ggattggaga gaaatggctc agtggtaag
2341 agtcaattc ccagcaacca catgattgtt cacaaccatc tgtaatggta tctgtatgg
2401 tctctggta tggatgtcaaga aagtggatgtt gtttttttttataatataatc
2461 aaccaaaaaa ccccccataat ttcaacaaca gatatgtctt ggtctggatc ttccaggcat
2521 agggatagaa acacacagag tgggtggatc gtggatgttca ggtccggatc tccatgttgc
2581 gtttcagacc aagagaaagg gaaaagaaga gacaagcaac aag

H.sapiens adenosine deaminase (ADA) gene 5' flanking region and exon 1 (and joined CDS).
ACCESSION X02189

1 tccaggaaat gcgcgatcca ggccggcggg cggggcgggg gctccggcga gagggcgggc
61 cccgggaacg gcggcggcg gggcgggagg cggggcccgg cccgttaaga agagcgtggc
121 cggccgcggc caccgtggc cccagggaaa gccgagcggc caccgagccg gcagagaccc
181 accgagcggc ggcggagggc gcgacgccccgg ggcgcacgag ggcacc

Homo sapiens mRNA for pre-proinsulin.
ACCESSION X70508

MALWMRLPLALLALWGPDPAAAFVNQHLCGSHLVEALYLVCGERGFFYTPKTRREA
EDLQVGQVELGGGPAGSLQPLALEGSLQKRGIVEQCCTSICSLYQLENYCN"

l gctgcatcg aagaggccat caagcacatc actgtcccttc tgccatggcc ctgtggatgc

```
61 gcctcctgcc cctgtggcg ctgctggcc tctggggacc tgacccagcc gcagccttg  
121 tgaaccaaca cctgtgcggc tcacacctg tggaaagctct ctacctagtg tgcggggAAC  
181 gaggcttctt ctacacacccc aagacccgccc gggaggcaga ggacctgcag gtggggcagg  
241 tggagctggg cggggggccct ggtagcaggca gcctgcagcc ctggccctg gaggggtcccc  
301 tgcagaagcg tggcattgtg gaacaatgtt gtaccagcat ctgctccctc taccagctgg  
361 agaactactg caactagacg cagcccgacg gcagcccccc accccggcc tcctgcacccg  
421 agagagatgg aataaaagcccc ttgaaccagc
```

Homo sapiens leptin (LEP), mRNA.
ACCESSION XM 004625

"MHWGTLCGFLWLWPYLFVQAVPIQKVQDDTKTLIKTIVTRINDISHTQSVSSKQKV
LDFIPGLHPILTLSKMDQTLAVYQQILTSMPSRNVIQISNDLENLRDLHVLA
FSKSCHLP
WASGLETLDLSLGGVLEASGYSTEVVVALSRLLOGSLODMLWOLDLSPGC"

Figure 17

2101 gctatcacac agtgggttgtt ggatctgtcc aaggaaactt gaatcaaagc agttaacttt
2161 aagactgagc acctgcgtca tgctcagccc tgactgggtgc tataggctgg agaagctcac
2221 ccaataaaaca ttaagattga ggcctgccc cagggatctt gcattccag tggtaaaacc
2281 gcaactcaccc atgtgccaag gtggggtatt taccacagca gctgaacagc caaatgcatg
2341 gtgcagtta cagcagggtgg gaaatggat gagctgaggg gggccgtgcc cagggccca
2401 cagggAACCC tgcttgact ttgttaacatg ttactttc agggcatctt agcttctatt
2461 atagccacat cccttgaaa caagataact gagaatttaa aaataagaaa atacataaga
2521 ccataacagc caacagggtgg caggaccagg actatagccc aggtcctctg atacccagag
2581 cattacgtga gccaggtaat gaggactgg aaccaggag accgagcgct ttctggaaaa
2641 gaggagtttc gaggttagt ttgaaggagg tgagggatgt gaattgcctg caigagagaag
2701 cctgtttgtt tgaagggtt ggtgtgtgg aatgcagagg taaaagtgtg agcagttagt
2761 tacagcgaga ggcagagaaa gaagagacag gaggcaagg gccatgtga agggacctg
2821 aagggtaaag aagtttgata ttaaaggagt taagagtagc aagtctaga gaagaggctg
2881 gtgcgtggc caggggtgaga gctgcgtcg aaaatgtac ccagatcctc acaaccacct
2941 aatcaggctg aggtgttta agcccttgc tcacaaaacc tggcacaatg gctaattccc
3001 agagtgtgaa acttcctaag tataatgtt tgtctgttt tgaacttaa aaaaaaaaaa
3061 aaaaagttgg cgggtgggg tggctcacgc ctgttaatccc agcacttgg gaggccaagg
3121 tggggggatc acaagggtcac tagatggcga gcatcctggc caacatggt aaaccccgctc
3181 tctactaaaa acacaaaagt tagctgagcg tggtggcgcc cgcctgttagt cccagccact
3241 cgggaggctg agacaggaga atcgctaaa cctgggaggc ggagagtaca gtgagccaag
3301 atcgcgcccc acactcccg cctgtatgaca gagcgagatt ccgtctaaa aaaaaaaaaa
3361 aaaaagttt ttttaaaaaa aatctaaata aaataactt gccccctg

Homo sapiens cholecystokinin (CCK), mRNA.

ACCESSION XM_003225

"GSAAGLLRLETPSQLRPNPKAMNSGVCLCVLMAVLAAGALTQPVPPADPAGSGLQRAE
EAPRRQLRVSQRTDGESRAHLGALLARYIQQARKAPSGRMSIVKNLQNLDPSHRISDRD
YMGWMDFGRRSAEYEYEPS"

1 ggctcagctg cgggtgtgtc cgggtggaa acgccaagcc agctgcgtcc taatccaaaa
61 gccatgaaca gggcggtgtc cctgtgtgtc ctgtatgggg tactggcggtc tgccgcctg
121 acgcagccgg tgcctcccgc agatcccgcg ggctccgggc tgccgcggc agaggaggcg
181 ccccttaggc agctgagggt atcgagaga acggatggcg agtcccgagc gcacctggc
241 gcccgtgttccatgcgtcc cccatggatccatgcgtcc cccatggatccatgcgtcc
301 gtaagaacc tgccaaacctt ggaccccgcc cacaggataa gtgaccggga ctacatggc
361 tggatggatt tggccgtcg cagtggccgag gagttatgtt accccctcta gaggaccccg
421 cccatcgccatcg cccaaacggga agcaacctcc caaccccgag gaggcagaat aagaaaacaa
481 tcaacactcat aactcatgtt ctgtggatgt tgacattgtt tgatcttattatgtt
541 tcaatgtgaa aatgtgtctt gtaagatgtt ccagtgcac cacacaccc accagaattt
601 tgcataatggaa agacaaaatgtt tttcttcat ctgtgactcc tggctgtaaa atgttggat
661 gctattaaag tgatttcattt ctgcc

CCK Promoter (Rat)

ACCESSION S70690

1 aattcgccg ctaagccca ttattcacgt ttccagacat gtcacaaata cagctaattc

Figure 18

61 ctacaacctg agctgtgtca tgggggggg gggaatcacc cacagcatt aatctgcgtc
121 tgtttaaac acgttgcttc taagtaaaga gaccgctaga gccacaacca ggaacctaa
181 tgctgctggc atcacttgcc ttcatagt ctcctcagc cgaaacccc ccacgctggg
241 tgcctctct attagaaag agttctaaag ctttctct tcaccctaga ctggcaaggt
301 tgagggttagg ctgagggttg caagactgt agaaaaggga gcccctct tcttctgtc
361 cggtgagtat ctacccaag atcctcacca cccagtggaa tcccgtaact ctagaggaaaa
421 ggaagaactc tagaggacgg gaagatcatt gcaagctcc ctatgtgtc gagcccagcc
481 cgctccactc acccagccag agcttgaggg tgcttgagac actctctggc gccacttcgc
541 gacaaaatc atcggtagat gtaggctggt gagaagtcat ctggaaaga aatggaaacc
601 tttccccaa aggcttccg cacaaaaggc aagagctca cccaggatct taaaattctg
661 taagacgaga atccacgagg ccaactgtga ttgagttctg aaaaatttgag agccctactc
721 ccctctctca ctgtggggag cccactcagg tctgaagtgc tcccgagaa catgccagaa
781 ttacatttc tgacacctag tctgtgaggg tccccgggtt tcctggaagg attgtatccc
841 tcaaagctca ctaaacagtg gtcagctct ccattccaga caaaacctctg ctctctccg
901 ggagtagggg tggcacccctc cctgaagagg actcagcaga ggcacccgaac aggggtgggg
961 ggaaagctgt ttagataaag aggaggactc atacaagaat ccccgctgg gaggggctat
1021 cctcattcac tggcccggtt cccttctccc gggggccac ttgcgtcggt ggtctctcca
1081 gtggctgcct ctgagcacgt gtcctgccc actgcgtcag cactggtaa acagatgact
1141 ggctgcgtac cggggcggggc tatttaagag gagtcgcctt gcccgcgtcc ctcaacttag
1201 ctggacagca gcccgtggaa accgccaagc cagctgactc cgcacccgaa ggtaaatggc
1261 tggcagatcc aagaatcatg agtgtgaaga actggcctgt agctttgcat ctattgcgt
1321 tttagctttc cattttctgt gcctccctc acttgacagc tg

Human messenger RNA for growth hormone (presomatotropin).
ACCESSION V00519

"MATGSRSTSLLAFLCLPWLQEASFPTIPLSRPFNDAMLRAHRLHQLAFDTYQEFE
AYIPKEQKYSFLQNPQTSLCFSESIPTSNREETQQKSNLELLRISLLIQSWLEPVQFLRSV
FANSLVYGASDSNVYDLLKDLEEGIQLMGRLEDGSPRTGQIFKQTYSKFDTNSHNDAA
LLKNYGLLYCFCRKDMDKVETFLRIVQCRSVEGSCGF"

l cgaaccactc agggctctgt ggacagctca cctagctca atggctacag gctccggac
61 gtcctgctc ctggcttgc gctgctctg cctgcccgg cttcaagagg gcagtgcctt
121 cccaaccatt cccttatcca gccctttga caacgctatg ctccgcgcccc atcgctgca
181 ccagctggcc ttggacacct accaggagtt tgaagaagcc tatatccaa aggaacagaa
241 gtattcattc ctgcagaacc cccagaccc cctctgtttc tcagagtctta ttccgcaccc
301 ctccaaacagg gaggaaacac aacagaaatc caaccttagag ctgcctcgca tctccctgct
361 gctcatccag tctggctgg agccccgtca gttcctcagg agtgtctcg ccaacagcc
421 ggtgtacggc gcctctgaca gcaacgtcta tgacctctta aaggacctag aggaaggcat
481 ccaaacgctg atggggagggc tggaaagatgg cagccccgg actggcaga tcttcaagca
541 gacctacagc aagttcgaca caaaactcaca caacgatgac gcactactca agaactacgg
601 gctgctctac tgcttcagga aggacatggc caaggtcgag acatcttcgc gcacgtgca
661 gtgcggctct gtggaggggca gctgtggctt ctagctgccc gggtggcata cctgtgaccc
721 ctccccagtg cctctctgg cccttggaaatg tgccactcca gtgcccacca gcctgtctt
781 aataaaaatta agttgcata

11

Figure 19

Rat GIP Promoter -1 to -1894

(-1894)

5' _GAGTGGCGACAGGCTGCTGCTAGCAGGCTCTACACTGAGCTAACCCACCCATAT
ATATACA TAGTTACTATTAGCTTATTATTTAAGATTATCATTATATATAG
TACACTGTAGTGTCTAGATAACACAGAAGAGGCATCGGTCTTACAGAGAGCCACC
ATGTGGTTGCTGGGGATTGAACTCATACCTCTGGCAGAGCAGTCGGTCTTAACG
CTGAGCCATCTCTCCAGCGCCCCAAAGCCCAGCTTTAAAAATATTTAAAATTCT
TTCTACAGATTGTTTATGTATATGAGTGTGTTGTGATCGTTGATGTGTGTA
GTGTGCATGGCACATGCCAGTGGGCCACAGACAGAGGGACATGAGGATTCCCCTGAA
ACTTGGAGTTACAGATGGCTGTGGCTGCCATGTGAGTGAGCGCCTTGGAACCAAA
CCTGGGTCTGCACAAAAGCAACAAGCACTCTTAATCGTTGAGCCACCTCTCCAACC
CCTTGATATTCTTCTGTTGGTGCATTAAAATTGATAAACAGAGGGTTTCTTATT
TAAAGATTTATTATTTATGTGAGTACACTGTTGCTCTTCAGACACATAGAACAG
GGCATTGCTGGATTCTGCTACAGATGGTTGAGGCCACCATGTGGTCTGGGAGTT
AAACTCAGGACCTCTGGAAGAGCAGTCAGTGCTCTAACCACTGAGCCATCTCTCCA
GTCCCTCCTCAACCTCTGAGAACAGGCAAACCTCACCAGTATTGGCTTATAAATC
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GATAAGAGGTTTCAGGTTAATCAGCACCCCTGTGGTGTGGATATAAGGAAGCTAA
CACAGGGTCTTGAAGCAAGATC_3' (-1)